Journal of the Amateur Photographic Society of Madras.

Vol. 2.—No. 10. Price As. 8.

September, 1896.

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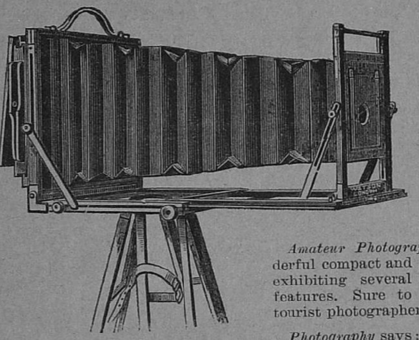

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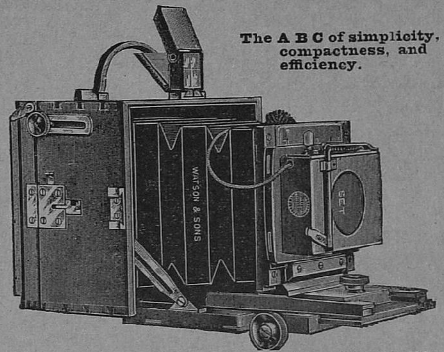

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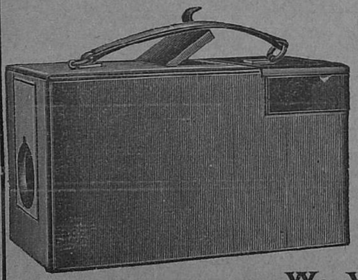

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Vol. II. No. 10. **September, 1896.**

Journal of the Amateur Photographic Society of Madras.

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EDITORIAL NOTES.

In an article entitled "Printing Difficulties in Hot Weather," *The British Journal of Photography* points out the necessity for the use of the alum bath for printing papers, during the recent hot weather which has been experienced in England. It recounts its own experience of the gelatine film of prints becoming attached to the paper used for rubbing down the face of the print in the act of mounting, and the experience of an amateur who found the coloring matter of his prints oozing into the washing dish. The frequency of such experiences as these in this country, where the washing water is normally at such temperature as "to upset the tottering equilibrium of the gelatine," cannot fail to awaken sympathy with these difficulties. A very recent experience of the writer caps even all this. One and a half dozen plates were exposed in the hand camera. After developing them (with the makers' formulated developer: Pyro and Sodæ Carb.), the first few plates reticulated badly in the fixing bath, a few more were treated with alum before fixing with the same result, a few more were hardened in 1 to 7 formalin before fixing but the toughened film separated from the glass, the rest were developed with metol and fixed out safely and then alumed, but in the washing tank they developed a chicken-pox like eruption all over the film. The nett result of the whole experiment was the loss of 18 plates. The writer happens to know that this was also the experience of another worker in Madras using the same brand of plates, except that some of the plates reticulated in the developer itself. Where the alum bath would save prints at home, not even plates would go through the ordeal at times in Madras. The *British Journal* believes that a much safer application is the chrome alum bath, 4 or 5 grains to the ounce, especially if the chrome alum is first purified by Professor Burton's method of washing the powdered crystals with spirit.

The writer of this note was recently led to try several brands of plates, for high speed shutter work, but failed to obtain a single plate whose gelatine film did not decompose during the development and fixing, with only one notable exception in the case of a well known brand of plates whose films are remarkable for their toughness and reliability in this respect. Makers of plates at home have had the unsuitability of their gelatine plates for the tropics pointed out over and over again, and it is a strange thing that no attempt seems to be made to remedy the defect. We have every reason to believe that in most of these cases all that is wanted to demonstrate the superiority of their emulsions and to ensure large orders is a gelatine stratum that will stand fairly prolonged treatment with water at 85° or 90° Fahr.

MANY have been the enquiries as to how reliable sodium sulphite is to be obtained. As we all know, the crystals of this salt as met with in commerce very often consist almost wholly of sulphate, and the presence of the latter salt in the developer is undesirable as it retards development in a very unsatisfactory manner. The most satisfactory way of obtaining the sulphite is to make it for oneself. It can be easily obtained in solution by passing sulphurous anhydride into a boiling solution of sodium carbonate, and subsequently neutralising the excess of acid; but the photographer unaccustomed to chemical operations must buy the salt, and in that case he must be careful to see that the lumps are quite clean and do not show signs of conversion into white powder, for sodium sulphite oxidises by exposure to air and thereby becomes changed into sulphate. A rough and ready way of comparing samples is to dissolve an equal weight of each (say 20 grains) in an ounce of water, add to each solution about 50 drops of hydrochloric acid followed by a sufficient quantity of solution of barium chloride until no further turbidity is produced. This turbidity being produced by the presence of sodium sulphate, that sample which gives the least turbidity should be preferred. The salt should be kept in solution (1 in 4 or 5) with strong citric acid added until the solution reddens blue litmus paper.

The solid salt however keeps better when it is free from its water of hydration, in which state it is known as "anhydrous sodium sulphite." It can be obtained in this form by heating a reliable sample of the crystalline salt to a high temperature, in an oven or on a sand bath. Another method is given by a writer in the *British Journal of Photography*, and appears to depend upon a peculiar property which sodium sulphite seems to have of separating from boiling solutions of the mixed sulphite and sulphate. On getting a sample of sulphite of crystals with dusty powder, he says: "I sift out the dust and proceed to make a warm saturated solution of the remaining crystals. I then partly fill a glass boiling flask with the crystals and cover them with the warm saturated solution, which is then raised to the boiling point by immersing the flask in a saucepan of boiling water, the contents being kept in motion by a gentle swirling action of the flask. When as hot as it can be got in this manner, the liquid after a final shake, is quickly poured off into a thin beaker glass, when it will be found to be milky or opaque, from the presence of a fine powder held in suspension, which is supposed to be anhydrous sulphite of soda. This quickly settles down, and the supernatant liquid is poured back into the flask, and the boiling operation repeated until no more of the anhydrous salt can be extracted, or until a sufficiency has been obtained. If allowed to cool after boiling, the white powder will redissolve, hence the necessity for pouring off the liquid quickly. In this manner I get even from the most suspicious looking samples a product which in dissolving to saturation at normal temperature is far nearer to the correct composition of neutral sulphite of soda than the majority of samples sold as such, as can be proved by the barium chloride test followed by hydrochloric acid."

THERE are occasions on which the evidence afforded by photography materially assists in furthering the ends of justice, and that this fact is receiving greater recognition is apparent from the frequency with which we read of cases in which such evidence is received in courts of justice to settle matters which are disputed by verbal testimony. In railway accidents much valuable information as to their cause might be obtained by taking photographs before anything is disturbed; in cases of murder photographs of the scene indicating the position of the victim and its surroundings would often definitely settle questions which afterwards arise from discrepancies in the verbal testimony of wit-

nesses who perhaps were too excited to make accurate observations at the time; in the discovery of forgery on valuable documents, the identification of criminals, the detection of counterfeit notes, and in many other ways photography may and does afford valuable aid in furthering the ends of justice. In the recent "Chelsea cruelty case," photographs of the children taken shortly after their rescue were put in and received as conclusive evidence, and the offending parents will no doubt curse photography to the end of their days. During the hearing of the Investigating Senate at Philadelphia lately, the Municipal Association, in their efforts to show that the police interfered at the Municipal elections, produced instantaneous photographs which had been taken by a photographer posted in a second-floor window of a house. Many such photographs were produced representing scenes on election day and were identified by the persons who took them. Indeed the police appear to have been systematically shadowed by photographers.

LATTERLY X ray photographs, or radiographs, have frequently rendered signal service in certain cases in courts of law. The degree of injury resulting from an accident, when defined by a radiograph, disposes of much doubt that might exist for instance as to the amount of damages; but while injury to limbs are thus capable of being elucidated in some cases without much legal argument, injury to affections still remains a fertile field for lawyers. The broken heart is still beyond the reach of X rays; but even this may succumb. Indeed new developments of the X rays are so constantly being reported, that the credulity of ordinary beings has been so much stretched, that some of them will believe anything as to the possibilities of the New Photography. Much amusement has been caused by the announcement of an invention (American, we need hardly add) which, as an aid to diagnosis, of course licks creation. The invention is said to be a small transparent pill which, instead of being made up of bread crumbs and soap, is charged with X rays. It is in fact "the Röntgen pill." The enquiring doctor lets his patient swallow one of these and it at once lights up the patient's internal economy, thus affording great facility for investigation of obscure complaints. When the light goes out the transparent capsule melts away. A contemporary suggests that the invention is capable of much wider application, since with a supply of these every man can become his own lamp-post to the advantage of himself and his neighbourhood; but it adds that a limitation of the dose is obviously necessary, since by rashly swallowing two or three pills at a time the police might be misled into calling out the fire brigade. It however confidently recommends the pill to any one in need of a "light meal."

Serious attempts however have been made to impose upon the public, as for instance in the case of an advertisement by an enquiring agency that engages to find out where people go, what they do, &c. "Owing to the success —— has personally achieved with the New Photography, he is prepared to introduce the same in divorce matters free of charge." As the *British Journal* says, it would be interesting to learn how the New Photography can be utilised in divorce matters even if a substantial charge were made instead of its being free.

A case of the biter bit is however refreshing to read of. The use of X rays as a *depilatoire* attracted certain of the fair sex to visit a savant who advertised the painless and instant removal of the silky down so dreaded by them. They paid the fees and their faces were "sprayed upon" by X rays; but the incipient moustaches could not be charmed away. The ladies therefore went in a deputation and informed the professor that unless he refunded their money they would proceed instantly to operate on the hairs of his head. The money was promptly returned.

"WHAT is *The Linked Ring*,' we have been asked. It is the name applied to the general committee of the Photographic Salon, a body of photographers having purely artistic aims. It held its first annual exhibition in London some three or four years ago, and it has been the means of directing a large amount of attention to the artistic possibilities of photography. Its membership is limited, but it has no constitution and levies no fees; and its only officer is the honorary secretary who meets expenses by a "whip round" when required. Election to this exclusive body of artistic photographers is made by suggestion from the Ring itself, any one showing decided artistic ability in his work being liable to be invited to enter. Its membership roll includes such well known names as: Craig Annan, Bernard Alfieri, Bergheim, Shahpoor Bhedwar, George Davison, Horsley Hinton, Eickemeyer, Gale, Stieglitz, H. P. Robinson

and others whose pictures are constantly before the photographic world. They provide their own Judging and Managing Committees, each one's pictures being judged by the others in his absence. The exhibition at the Salon is open to outsiders as well as to members, no medals or prizes are given, the honor of having the picture hung is the coveted award, the rejections being many. It is now too late for exhibitors from India to send to this year's Salon as it opens at the end of this month.

THIS reminds us that exhibitors in this country will soon be getting negatives ready and brushing up generally to send their exhibits to some of the cold weather exhibitions, and so it might be useful to throw out a few hints for the benefit of those who are still young in photography. We know of some who from modesty refrain from sending their work to exhibitions, and to such we can only recommend that they should throw off their modesty and show their work. Others again will not exhibit because their pictures are small; but of late years artistic effect has been the main consideration in the minds of judges at photographic exhibitions, and the merit of a picture is altogether independent of its size. As a matter of fact medals have in recent years been awarded by the R. P. S. to pictures smaller than quarter plate. The judgment of a capable judge would not be influenced by the size of a picture. The proportions of the picture (the shape, if we may so call it) are a far more important matter. There is nothing which the young photographer is so loth to sacrifice as a portion of his finished print, and one might as well advise him to shoot himself as tell him to cut away large slices out of a 12 x 10 print in order to redeem a 7 x 5 picture contained within it. Trim away until you obtain the shape which conforms best to the main lines of the picture, in this way accentuating them and giving them greater prominence. For instance many views with a straight horizon line and little or uninteresting foreground and sky are much improved by cutting away top and bottom so as to reduce the picture to a mere strip. One can easily settle beforehand what to do, by covering portions of the picture with strips of paper moving them about so that they cover or uncover larger or smaller portions of the picture; and in this way a definite idea can be arrived at as to what shape will harmonise best with the final result.

While we are in the mood for advising we might further add it is quality rather than quantity which is required for exhibition. Some exhibitors will contribute a dozen indifferent prints, whereas the time and energy expended in their production would have been far better spent, with much greater satisfaction in the end, in making one good picture. It is of course unusual for many to reach the highest excellence, and the standard of merit is even higher now than it has ever been, but strive for the best results which can be obtained by the means at your disposal, work with a definite purpose, it may be to produce a certain effect, and, if need be, try every printing method known to you until the desired result is approached or reached. A great deal will of course depend upon the individual himself as to his knowledge of what is good and what is not good; and much discretion is called for in the suppression of bad work, for it is difficult for the exhibitor to live down the bad influence produced by publicly exhibited indifferent work. Self-restraint in the quantity sent should be rigorously practised, otherwise one is liable to spoil oneself by establishing a sort of average, and the result in such cases is that one never rises above what Mr. Robinson in his Presidential address at Leeds the other day called "the usual thing." Tolerable results are easy to produce, and there is much of it; and one of the most frequent causes of mediocrity is that many amateurs aim at quantity rather than quality.

We fear that these remarks may have a deterrent effect upon some; but if they lead to concentration of effort rather than dissipation of well meaning energy, our object will have been attained, for well directed efforts cannot but be productive of meritorious work, gratifying and instructive alike to the exhibitor and to those who have the opportunity of deriving pleasure and instruction from a study of such exhibits.

A DIRECT method of producing duplicate negatives, without the use of dia-positives, is confidently recommended by G. Balagny (translated into Wilson's *Photographic Magazine*). The principle of the method has long been known, but he claims that by following his directions any one may obtain good results. The method involves two exposures on the same plate. A positive is first made on the plate, and then ob-

literated by chemical action. The remaining unacted on bromide of silver is, after a second exposure, developed into a negative. The description of the process is best given in the author's own words:—

"The positive is best made in the camera. The exposure must be full, so that the light may well penetrate into the bromide of silver film.

"A hydroquinone developer with plenty of bromide is used:

Water	... 1000	parts
Sulphite of soda ...	... 250	,,
Hydroquinone ...	... 20	,,

"For use, take seventy-five parts of above stock solution, seventy-five parts of water, fifty parts of a twenty-five per cent. solution of carbonate of soda, twenty parts of a ten per cent. solution of bromide of potassium, and fifty parts of ninety per cent. alcohol.

"Development should be very slow (dish covered), so that the result may be a brilliant positive of pure whites and deep blacks. Development must be continued until the deepest blacks have fully penetrated the film and the picture is plainly to be seen on the reverse side. This kind of development is the chief condition of success. After development, wash thoroughly to remove all traces of developer.

"The second exposure is now to be made. The plate is placed upon a mat black support (black paper, ebonite, &c.), a black mask is applied to prevent the entering of light through the glass edges, and the plate exposed by diffused open light for from ten to twenty seconds. The white portions of the film, originally of a greenish shade, soon become greyish. This indicates sufficient exposure, and the plate is returned to the dark room, superficially rinsed, and placed into the following bath:

Water	... 1000	parts
Bichromate of Potash ...	10	,,
Nitric acid ...	... 20	,,

"This bath, compared with other formulas for this purpose, is very weak. But, as a matter of fact, a very small quantity of bichromate is sufficient to oxidise the silver, of which the picture consists. This bath is to act until the positive picture has completely vanished, and only the bromide of silver, destined to form the negative, is left in the film.

"Let me again repeat the main requisite for success: the thorough development of the positive. If this is neglected, then the lower strata of the film will still contain unchanged bromide of silver, which had not been exhausted in the formation of the positive, and which in the now following second development takes a part, forming a positive. A hybrid of a positive and a negative results. As soon as the bichromate bath has destroyed the positive picture, the plate is to be washed at once, and very thoroughly. Its surface should come as little as possible into contact with the hands, as in the following development spots and failing of the film would surely follow.

"After thorough washing, the negative is to be developed in a very clean dish. Paramidophenol (rodinal) and hydroquinone, as used for negative development, may be applied. Before fixing, the plate is bathed for five minutes in a five per cent. solution of chrome alum."

We have received from the publishers, Messrs. Percy Lund and Co., another of their Popular Photographic Series, entitled *The X Rays*. The author has done his best to compress a great deal of information into the small amount of space allotted, and he has succeeded in writing a most interesting little treatise. The first half of the book gives an account of the vibrations causing sound, heat, and light, and of electrical discharges through rarefied gases, leading up to the discovery of the X rays. The latter half of the book treats of the photographic methods of employing the X rays, the uses of radiography, and a short exposition of the theories as to the nature of these rays. The book is written in a very clear way and the information supplied though concise is definite.

The Thornton-Pickard Manufacturing Company have sent us a portfolio of large colotype views of their works, showing the interiors of various parts of their departmental workshops concerned chiefly in the production of their well known shutters. A description of these works is given, from which we learn that the manufacture of shutters does not constitute their sole work, but that they also make the "Ruby" camera, tripods, plate-holders, &c. They have brought out a new camera, the "Amber" which can be used as a stand or as a hand camera. The price of it seems very moderate, and we doubt not but that the workmanship is equal to that of their shutters which has secured such a good name

for this firm. We further learn that some improvement has been made in the rubber of which the pneumatic balls are composed.

The well known firm of photographic merchants, Messrs. Harrington and Company of Sydney, have commenced a serial publication called the Harrington Photographic Series, the first number of which has been sent to us for review. It is a practical manual for photographers and printers and amateurs on *Photo-Engraving of Half-tone blocks* (*mezzo-tint*) *made easy* by John Lemane. After giving a brief description of the apparatus required and the cost of an outfit, the preparation of the original picture, the making of the screen negative, reversing, etching the plate and mounting and proofing the same are clearly described. The manual is intended as a guide for the beginner and therefore theoretical matter has been avoided and plain practical directions have been given in a way which cannot fail to be most useful to anyone taking up half-tone work.

MAXIMS FOR THE AMATEUR.

I.—The Baby and the Camera.

When first the amateur begins
  His graphic art to ply,
He'll be confronted for his sins
  With babies pink and shy,

Accompanied by their mothers, who,
  With pardonable zeal,
To photograph their 'chicks,' to you
  Will artfully appeal.

'Tis best to turn unheeding ears
  To such maternal wiles,
Or you must 'take' them robed in tears
  And print them wreathed in smiles.

So small! and yet demanding much
  (Should you unwisely yield)
An iron nerve, a master touch,
  The camera to wield,

Drop-shutter, and of plates a pile,
  And eke a wealth of tact,
To get the innocents to smile
  And catch them in the act.

Then failure! 'tis the very deuce,
  And drives the parent wild;
Should you unwittingly produce
  A double-headed child.

* * * *

The beauty in the baby's face
  One eye alone can see—
Its mother's—there is not a trace
  Revealed to you or me.

None but a Raphael ever could
  Since mediœval time
Transform our fretful baby-hood
  To something more sublime.

So, amateurs, be suave yet bold
  Beseeching friends appease,
Quote 'painting lilies,' 'gilding gold.'
  But take no babies *please*.

* * * *

No subject for photography
  Are infant's awkward plights,
Far fitter for philosophy
  In transcendental flights.

A sample now I will provide—
  A sample nothing more—
To show the field of thought is wide,
  And worthy to explore.

The infant and th' exposéd plate
  Are types of one another,
Their latent energies await
  Some outside force or other.

As sensitive as baby is
  So are the plates you try,
And like the baby too I wis
  Are either wet or dry.

The baby and the plate I swear
  Are in the self-same plight,
They both require a lot of care
  Ere they develop right.

Their life is rounded by a 'bath,'
  Their cry is 'wash' indeed;
And now we urge them on their path,
  And now restraint they need,

Now careful nursing through the ills
  That all their ways beset;
And we must pay the chemist's bills,
  And live in hope—and yet

We fog our plates, we fog their brains,
  With methods ill-advised;
Then blame their m(M)aker for the stains
  That hide the image prized.

* * * *

The moral must be clearly seen
  By any addle-pate,
I'll draw the line at verse eighteen
  And leave it to its fate.

C. S. M.

1094296

OUR HOME LETTER.

From time to time certain kind photographic friends, living in India, Australia, New Zealand, and elsewhere, have sent me albums containing photographs illustrating their work. In nearly every case it has been necessary to unmount the photographs, and take them out of the albums, the latter being of such poor quality and having such thin leaves, that the prints were curling up and discolouring, presumably from the action of some sulphur compound used to bleach the cardboard of which the leaves were made. Most of these albums, it must be said, were made in Germany, a few of them were never intended for the reception of photographic prints, but were simply turned out for cheap scrap books. I am drawing attention to this point here in order to caution photographers in India against using cheap albums with leaves of cardboard unfit for the purpose. A fairly stout board is required, but that it shall be free from deleterious substances is absolutely essential.

Some difficulty is experienced I believe in obtaining good photographic albums out in the Colonies. When this is the case, my advice is buy the best you can get, but do not mount the photographs in it with paste, or indeed any form of mountant. Simply attach to each of the four corners of the print a strip of gummed paper about half an inch square bent double on itself, then moisten the other side of the four slips and place in the album. The method is similar to that adopted by collectors of stamps. It has many advantages, among which may be mentioned that of being able to easily detach the print and substitute another at any time, that if the leaves of the album are thin they will not curl up, and that no damage can be done to the print. Indeed I have found this an advantageous method even where superior albums were concerned, and specially useful for little scrap albums to give to friends which I make out of rough brown paper of a suitable tint, leaving the edges rough, and fastening them by means of macramé cord.

As I have begun this letter by giving advice, I may as well continue in that strain for this month. Allow me therefore to say a few words to novices. Do not at first make a large number of exposures until you have developed several immediately after they are taken. It is best indeed to make but one exposure, and go forthwith to the dark room to see the result, carrying this on until a perfectly successful exposure has been made. Then when you set out for the first time into the field, make elaborate notes, give the exact details of exposure, light, plate, &c. After awhile you may find it unnecessary to continue this, but at first it should be carefully performed.

An exposure meter is desirable for some purposes, but it is preferable to become accustomed to noting the appearance of the light on the ground glass, especially with a small stop. The eye will soon become able to judge all the variations in exposure needed according to the light. So much for the novice.

To the fully-fledged amateur I would say, when you go out with the camera let it be for a whole day, or the best part of the day. Working for merely an hour or so does not give time to get into the swing of things, the mind is too much occupied with erecting the camera, focussing, and all such little details which distract and prevent the whole attention being given to the picture; but if the whole day is given up to photography, these small matters by frequent repetition are performed automatically, and it then seems possible to shake off mechanical manipulations and to get nearer to nature.

It is surprising what an eye for effects the use of the camera gives you: contrasts of light and shade, groupings of trees and buildings, harmonious tints hitherto passed by unnoticed are instantly seen and appreciated by the man, whose mind has become tuned to nature's beauties with the constant practice in using the camera. It is surprising for instance, to mention one point only, the marvellous change effected by the sun in its daily round on the aspect of any particular landscape.

Talking of landscapes by the way, it is rarely that one sees a photograph of an Indian landscape in this country. Italian landscapes are common, as they have always been from time immemorial, but the beauties of India, excepting so far as some of its temples are concerned, are almost unknown here.

Some one was complaining to me the other day about the difficulty of providing one's friends with prints. If a man goes to a friend's house and takes a few photographs in his garden, or elsewhere, the obligation falls upon him to provide the said friend with prints, and often the obligation is no light one, especially if there are others staying there at the same time, who beg for "just a photograph or two." This difficulty can be modified considerably by pasting a set of prints on a card, and copying the whole lot to the size, say, of half plate. In this way a neat little souvenir can be produced which will probably give as much pleasure as the whole collection of prints, and is at the same time far less troublesome and less expensive. A cheap and good effect can be produced on any of the matt P.O.P. papers by fixing without toning, effecting a saving of labour and of time, and producing a pleasing brown tone. Colder tones can be obtained by leaving the print in the fixing bath longer.

Photography can be practised now with really very little difficulty. A recent introduction which contributes towards facility has been made by the firm of Messrs. Wellington & Ward. It is a negative paper supplied either in spools or flat pieces. This is different from the striping film which I mentioned a month or two back. Some prints I have seen from it appear to be practically as good as those from glass negatives. In the case of carbon prints, there is a great saving of time by having no reverse negative to make. I should think it will be largely used, especially abroad.

MATTHEW SURFACE.

PROCEEDINGS OF THE SOCIETY.

Monthly Meeting, held at the Masonic Hall, Mount Road.

Friday, September 4th, 1896.

Mr. F. Dunsterville, President, *in the chair.*

The Honorary Secretary communicated the following Prospectus of the Annual Open Exhibition to be held in January next by the Photographic Society of India:—

"Provided the Judges deem the exhibits of sufficient merit, the following medals will be awarded:—

A Special Medal for the Best Photograph in the Exhibition,
A Gold Challenge Medal tenable for one year for the best picture by a Member of the Society,
4 Gold Medals (one reserved for a Native of India),
12 Silver Medals,
15 Bronze Medals,

which it is proposed to apportion as follows:—

For all Exhibitors, Amateur and Professional.

3 Gold Medals. | 8 Silver Medals.
10 Bronze Medals.

For Amateurs of the Society.

1 Gold Medal. | 4 Silver Medals.
5 Bronze Medals.

It is proposed, provided they fill, to medal the best in each of the following classes:—

Class 1.—Landscape.
,, *2.*—Architecture and Interiors.
,, *3.*—Portraits and Groups.
,, *4.*—Genre Pictures and Studies.
,, *5.*—Photographs of Objects in Motion.
,, *6.*—Lantern Slides and Transparencies.
,, *7.*—Stereoscopic Prints and Slides.
,, *8.*—Photo-Mechanical Processes.
,, *9.*—Apparatus and Appliances.

There shall be no appeal from the decision of the Judges."

Particulars regarding pictures should be sent to the Exhibition Secretary not later than 15th December, and the exhibits must reach him not later than 24th December. The Rules and Regulations and Entry Forms can be obtained by applying to the Exhibition Secretary, Photographic Society of India, 57, Park Street, Calcutta.

PROPOSAL OF NEW MEMBER.

Mr. R. Ll. Jones proposed and Mr. Michie Smith seconded—

Mr. A. Mansfield

and he was duly elected to be a member of the Society.

THE QUESTION BOX.

(1) Why do the edges of bromide paper always turn brown; is it the fault of the paper or is it caused by the paper touching the sides of the developing dish?

This was not a common experience among members present, but brown edges are almost certain evidence of spoiled paper. Touching the edges of the dish would make no difference to the paper, if the dish were quite clean, but tainted fingers in picking up prints from the dish may discolour the edges.

(2) What is the cause of the mottled appearance of the two negatives passed round?

Such marks are sometimes developed by allowing the plate to remain in the developer without rocking the dish at all.

(3) What is the use of isochromatic plates and what are their advantages over ordinary plates?

Isochromatic plates are very sensitive to the green and the yellow rays of ordinary light, and their use enables one to easily obtain a correct translation of these colours, for example in copying a coloured picture. In landscape work also their tone-rendering is more truthful, and by the use of a screen clouds, which in an ordinary negative would be lost, can be secured on the same plate as the landscape. Where a correctly exposed ordinary plate would show something like bare glass where the greens and yellows have acted, an isochromatic plate shows a graded deposit in those parts, the resulting print exhibiting a gradation which more truthfully represents in monochrome the different colour values.

At the same time it should be pointed out that Mr. Ives recently demonstrated to the Royal Photographic Society that it was possible to obtain orthochromatic effects with ordinary plates, and to control the relative action of the different spectrum rays so as to render all the colours in photometrically accurate relation to one another. He showed by the results of a series of tests that even better results can be obtained with some ordinary plates and suitable colour filters (screens) than are *usually* obtained with yellow glass on orthochromatic plates; but with suitable colour filters equally good results can be obtained on the orthochromatic plate with much shorter exposures than are required with the ordinary plate. To secure the full orthochromatie effect on an ordinary plate with a screen the necessary exposure he said might be one hundred times that required with an Edwards' instantaneous isochromatic plate.

PICTURES FOR THE DAY.

Mr. Stoney, Mr. Willock, Mr. Michie Smith, H. H. the Elayah Rajah of Travancore, and Surgeon-Major VanGeyzel exhibited one picture each of "A Group," Mr. Phipps exhibited four, Miss Speechley two, Mrs. McNair three, Colonel Steavenson five, and Mrs. Elliot two.

CRITICISMS.

Group of Elephants.—One print shows signs of movement, while the other is under-exposed for the group: see the baby elephants. It is a difficult subject to arrange, but fewer animals would have made the task easier. A quick shutter exposure is almost a necessity for such a subject. One of the prints shows a masking mark on the sky line, and the other is too foxy in tone. The plates have, as you say, been spoiled by damp, hence the stellate marks.

A Tennis Party.—It is much better in subjects of this sort, where there are several people in the group and where the arrangement must be to a great extent artificial, that they should, if possible, at least be made to appear as if they were met for some common purpose. Half a dozen people don't as a rule sit down in a row and half a dozen others stand up behind them, except to be photographed. If you must take them in this position, then why let each one look in a different direction with totally different expressions? No advantage appears to have been taken, either, of the differences in the shades of the costumes, to build up pleasing forms of light and shade in the group; on the other hand, a tall figure in a white shirt is made to stand against a white pillar and the outline of the shoulder is thereby lost. A few of the figures if seated on the ground would have enabled you to build up a better *form* for the picture, and to avoid the conventional "rows" which are always displeasing.

A Madrassi Wedding Group in Burmah.—Here again are two "rows" undoubtedly being "took," but we would rather have them all looking at the camera as in this picture, than have them assume expressions which give the observer the impression that the units of the group have nothing in common and would have nothing to do with one another.

A Burmese Village Group is an improvement on the above, while

Youths in Burmah wearing the Yellow Robe is the best of the set. Unfortunately the lights are too scattered, and it would be better to cut away half an inch of the top of the picture to partially rectify this.

Todas.—A good print from a good negative. The lighting is effective, but too scattered.

Toda Mund, Government Sholah—just escapes being a good picture. The "row" of Todas in the foreground appears to be parallel with the stone wall, and had those on the left been brought nearer the camera, the linear contrasts would have been improved. The principal part of the picture is however too far to the left, but the defect can be remedied by cutting away an inch and a half of the right side from which it can be spared without damaging the composition at all. Nothing like learning early to cut away slices from a print, irrespective of size of plate, until you get the best picture out of it.

A Picnic Party.—The movement of some of the figures and the constrained attitudes of others spoil this group, which is in its general arrangement at least a departure from the usual group in "rows."

St. Thomas' Churchyard, though not "A Group," is far and away the best bit of composition shown at the meeting. There is good balance of lines and of light and shade, the distance not in too sharp focus is well rendered, and the lighting brings out the different planes in the picture. We should like to have seen the water a little less hard, a shade grayer in tone with a little detail; but this required special care in the development and is a technical defect which must succumb to experience. We should like to see some more landscape work from this quarter.

NEXT MEETING.

The *Picture Subject* is "A BUILDING"; and the evening will be devoted to a

Lantern Exhibition,

to which members are requested to contribute slides. Send your best half-a-dozen or a dozen slides to the Honorary Secretary, who will return them with care.

The Picture Subject for month after next will be "A STUDY OF FOLIAGE."

MISCELLANEOUS EXHIBITS.

Mrs. Elliot showed Tylar's Negative Storer, in the form of a book, containing twelve stout paper bags for negatives, arranged so that by pulling a ribbon the whole twelve are exposed.

A vote of thanks to the Chairman closed the meeting.

CORRESPONDENCE.

THE EDITORS OF THE JOURNAL,

Amateur Photographic Society of Madras.

Phosphorescence of a Plate in the Alum Bath.

DEAR SIRS,—I noticed a very curious and striking phenomenon a short time ago and I record it in the hope that some one, if not you, will be good enough to afford an explanation of it. After developing a plate, I rinsed it slightly and placed it in the alum bath. At the moment of putting the plate into the alum the surface of the plate glowed distinctly for quite an appreciable interval of time. There was no mistaking what had occurred, and the glow was like the phosphorescence of sea animalcules.

MADRAS, 4th September 1896. — Yours truly, C. E. P.

[Phosphorescence during development has apparently been noticed before now, for we find a note on the subject in a recent *British Journal of Photography* in which reference is made to investigators of 1888. It states that A. Helheim, in studying the action of formaldehyde as a constituent of the developer, saw the plate glimmering in the developer. It continues: "The light was bluish-white and observable even in the presence of the dark room lamp. The phosphorescence appeared as soon as all moisture was absorbed from the surface and lasted several minutes. Thinking the absorption an important factor, as the phosphorescence was imperceptible whilst the plate was in the dish, the writer tried the effect of another absorber of water, and added 30 c.c. of alcohol to the developer. A very intense phosphorescence was at once visible. As it passed away, it could be revived by shaking the bottle. The addition of alcohol, of course, precipitated the carbonate of soda and produced similar conditions to those in the experiments of Lenard and Wolff, who poured pyrogallic acid developer into an equal quantity of saturated solution of alum."

From the above it would appear that the phosphorescence noticed is not a property of the plate but the result of certain conditions in the developer.—*Eds.*]

An Enlarging Process.

DEAR SIRS,—I took the group, print of which has been sent to the meeting, on a quarter plate, but after ten days or so it crusted with white powder, Hypo. I suppose from insufficient washing in the first instance. So I rewashed it, when the film (Thomas' Extra Rapid) came off the glass and enlarged itself to the size which you see, so I dragged it on to a half plate and dried it on that plate and then printed with the result which you see. It strikes me as rather a novel way of enlarging.

OOTY, *31st August 1896.* — Yours faithfully, K. F. S.

[This method of making enlarged negatives is not novel, and what is advertised as the cresco-fylma method is practically a method of stripping the film off the glass, while the film enlarges by the action of the solution in which it is soaked during the process.—*Eds.*]

Amidol for Bromide Prints.

DEAR SIRS,—The two enlargements which I send were developed with the Amidol developer given in your last magazine, without the acid bath. It is much easier to work than the iron developer. The picture does not come up so rapidly, but a much longer exposure seems necessary. Perhaps I put in too much bromide. Would that make a longer exposure necessary? One of the prints is slightly stained; was that stained in the hypo? I found the hypo very discoloured when I had finished. Was that caused by insufficient washing before fixing?

MADRAS, *1st September 1896.* — Yours truly, J. M. N.

[Use less bromide and give a shorter exposure; the prints are very flat from over-exposure. The stain on the print is due most probably to the discoloured hypo. Wash the developer well out of the paper before fixing.—*Eds.*]

TO THE EDITORS OF THE JOURNAL,

Madras Amateur Photographic Society.

Sympathy.

SIRS,—I have been touched indeed by your "growl" in the August issue, and, as even a full waste-paper basket gives an air of prosperity to the office, I send you a contribution that will doubtless find its way there.

I need not say that it is original.

OOTACAMUND *31st August 1896.* — Yours truly, C. S. M.

[Many thanks. Our W. P. B. hasn't a chance, and we have sent it to auction. C. S. M. may therefore fearlessly send us more of his most welcome Maxims.—*Eds.*]

DEAR SIRS,—I sympathise with you in your "growl," which appears in the August number of the Journal. Although an absentee member, I still keep up my interest in the Society, from which I recieved so much assistance, as a beginner, and I would gladly help you if I could.

After leaving the Southern Presidency, my photography became very unsettled, and after struggling with difficulties of moves and vicissitudes of climate, I was compelled to put it on one side. After getting a bit settled here, I rigged up a dark room and wished to begin again. But I found it difficult to start where I had left off. I seemed to have lost "the run of it," and would perhaps omit simple, but important, details in manipulation, such as opening the slide, adjusting the stop, regulating the shutter, &c., so it will be seen that, at present, my position is that of picking up lost ground. I feel hardly in a position to send samples of my work for competition or exhibition, but to show that I am again at work, I send, by this post, three photographs, which I have recently taken.

The first I obtained during a drive which I took to the sacred and historical hill, named Parbutti, with the object of trying to get some photographs. It will be seen that there is a fall of water from a masonry channel, which some natives are utilising for bathing and washing their clothes. The preparations for the photograph afforded much amusement. The language of these people was a sort of jungli Mahratti, and all we could muster was English, Hindustani and Tamil. The boys under the water soon comprehended and entered into the arrangement, thinking it a good joke, but the old lady, who, in her shyness, had turned her back, began to cry and, I fear, thought she was about to be shot. One man, who was to have been a prominent figure, made a clean bolt after I had placed him in position, and has left a blank in the picture.

The other photographs are of the Royal Connaught Boat Club-house, taken at the time of the recent flood. One when the flood was nearly at its highest, the other after the collapse. No merit is claimed for these photographs, which were taken under most unfavourable circumstances for photography; it was densely overcast and was raining slightly when the exposures were made.

W. S. A.

[Thanks for your sympathy. Every little helps; and we are glad to welcome you back into photographic activity again. Your photographs will be shown at next meeting.—*Eds.*]

EXTRACTS.

The Development of Over-exposed Plates.

Among the numerous formulas published for the various photographic manipulations, one of the most important has thus far received but little attention, viz., the development, or, we may say, improvement, of an over-exposed plate.

Over as well as under-timing is a frequent occurrence, not only with beginners and amateurs, but happens to both the professional and advanced amateurs. When cases arise where exposures are made under conditions foreign to the usual practice, it frequently happens that it is almost impossible to properly judge the correct time for exposure. The result is an either over or under-timed plate. In every case, however, it is best to err upon the side of too much rather than too little time, as the fault can easily be manipulated in the course of development so as to ensure a useful negative. With an under-timed plate, on the contrary, the possibility of saving the plate by any special manipulation during development is a very circumscribed one. It is not the purpose of this paper to deal with under-exposures or their betterment, but to confine it to methods as offer us means for the improvement of such as are over-exposed. The problem under discussion is to be divided into two parts: (1) where the operator is cognisant of the over-timing; (2) cases where an uncertainty exists as to the time of exposure. In the first instance the operator will either mix his developer accordingly by an addition of several drops of potassic bromide to his normal solution, or he may resort to either the system of a slow vertical development, or he may over-develop his plate, and then try to save it by a careful reduction. Some operators, where over-timing is known, subject the plate to a preliminary bath of a concentrated aqueous solution of cupreous bromide, with beneficent results. In cases where the operator is not clear as to the proper timing, it is advisable to start the development with an old developer, and continue with a gradual

substitution of fresh solutions according to circumstances. In most cases, however, this procedure fails to answer, and where the excess in timing is very marked, one is forced to leave the negative to take its own course. I have endeavoured therefore to find some method by which we may correct any amount of over-exposure, and thereby control the character of the resultant image. A procedure of this kind must be of a nature to permit a view of its gradual action, and that it may be judged by the trained eye of the operator during every stage of its development. When one has an exposed plate, where it is not known whether the time was normal or excessive, the plate is to be placed in a tray, and the developer poured over it as usual; if the image flashes up quickly and flat, and gradually disappears in a grey fog, the plate was over-exposed. A plate of this kind should at once be taken out of the developer, and well washed under the tap. The condition of the plate at this stage is as follows: The haloid salts contained in the sensitive film during their exposure to the light have undergone two changes, consisting not merely in a chemical dispersion (Zerstreung) upon which the abovementioned chemical development is based, but they have also developed the peculiar property of a physical development, in so far that the exposed parts show an affinity for the metallic silver in a reducing solution of argentic nitrate, whereby the film darkens in proportion to the relative action of the light, or in other words the high lights are strengthened while the dark shadows are not affected. The chemical changes of the haloid salts bear no relation to the physical ones. Thus it appears that of argentic chloride, bromide and iodide, the former is chemically the most sensitive, while the physical action of the argentic iodide surpasses all the others. In other words, the greatest changes of argentic chloride have not been reached when the chemical reduction is complete. Consequently when the chemical development has resulted in an over-timed flat negative, and is then subjected to a proper physical development, we obtain a secondary image showing all the characteristics of an under-exposure. Now as both of these images are upon the plate in exact register, we produce by such combination a normal result, saving the over-exposed plate and giving us a perfect positive print. In the practical manipulation of this process, the plate, after having been taken out of the developer and well washed, is then placed in a negative bath—

Nitrate of silver	... ...	5 g.
Water, distilled	..	100 ccm.

where it is to remain for several minutes until the gelatine film has absorbed sufficient silver nitrate. The plate is then to be redeveloped by flowing the developer over the plate, similar to coating a wet plate. The object of this is to prevent any of the silver nitrate being lost from the plate. For such as are not familar with the wet collodion process, we will state that the plate is held in a horizontal position, and the developer is poured on at one corner, and thence spread evenly over the plate. The image comes up gradually; as soon as sufficient strength appears the action is stopped by washing under the tap, after which the plate is fixed as usual. In case this system of physical development fails to give a sufficient contrast, which is frequently the case where the over-timing has been excessive, the plate may be further intensified, same as the ordinary collodion wet plate. For this purpose any of the mercurial, lead, or cupreous intensification formulas may be used. Still better, however, is the following pyro-silver intensifier, to be used prior to fixing. The carefully-washed plate is flowed with a sufficient quantity of the following solution:

No. 1.

Pyro	... ...	10 g.
Alcohol, ninety-six per cent.	...	100 ccm.

No. 2.

Argentic nitrate	... ...	4 g.
Citric acid	... ...	6 g.
Distilled water	... ...	100 ccm.

For use take

No. 1	... ...	4 ccm.
Distilled water	...	100 ccm.

and immediately before use add an equal volume of No. 2. A 5 x 7 plate requires about 25 ccm. of above solution. No more than is necessary should be mixed at a time, as the diluted solution will not keep. When the intensification has progressed sufficiently the plate is to be well washed and fixed in the usual manner, bearing in mind to wash well before the final drying. The speaker further stated that the procedure had been applied to cases where from six to ten times the proper time had been given, and in every instance with satisfactory results. It is, however, advisable that operators who wish to make any extended use of above process familiarise themselves with the collodion wet plate process, if not already acquainted with it, as the whole principle of above manipulation is based upon the old collodion process.—*Photography*.

The Use of Orthochromatic Plates.

Professor W. K. Burton, of Tokyo, had a most instructive paper on this subject in the *Shashin Sowa* recently, and as our readers are the wide world over, and his remarks will be particularly interesting to someone, perhaps in an out of the way corner, dealing with subjects such as he refers to, we give the paper in its entirety. It surprises us somewhat that in a country in which colour effects are so well understood, and in which there are so many clever photographers, that orthochromatic plates are not more generally used. He says:

I cannot help expressing surprise that, whilst photography is so much to the fore in this country in nearly every other direction, so little is done with orthochromatic plates. It is true that there is only a very poor supply of such plates in Japan—in fact, there may be said to be no steady supply at all, but I feel sure that, if photographers knew of the real advantage that there is in the use of orthochromatic plates, a demand would be started, and once let there be a demand, it is certain that the dealers, as well for their own good as for that of the photographic public, will stock orthochromatic plates.

A brief word to begin with as to what "orthochromatic," "isochromatic," or, as Mr. Pringle—preferring English to Greek—has called it, "colour true" photography, really is.

Every photographer must know that reds and yellows in a photograph tend to come out black, whilst blues and violets, which to the eye appear much darker than yellows, tend to come out white. He will also, if his observation be at all acute, notice that the brighter and purer the yellows, the stronger the tendency to come out black, and further, that green of foliage comes out darker than it appears to the eye; so that many landscapes are ruined by great black masses which do not appear in nature.

The object of orthochromatic plates is to overcome this difficulty. It is now many years since German photographers recognised the fact that, if a sensitive collodion film be tinted with any of several dies that absorb yellow rays, the film becomes sensitive to these rays, and the yellow is no longer rendered black, but of about the right tint. Splendid work was done with wet plates in this way, in the copying of oil paintings which would give nothing but smudges with ordinary plates.

For long it was believed that, although the process was available for collodion, it was not for gelatino-bromide plates—that is to say, the plates every photographer is daily using. Undoubtedly the credit of demonstrating to the photographic public the capabilities of ordinary dry-plates treated by what is called the bath process is due to Mr. Dixon, of London. I very well remember the sensation that was produced—I suppose about twelve years ago—when Mr. Dixon showed three photographs side by side, one taken with an ordinary plate, one with an orthochromatic plate without yellow screen, the third with an orthochromatic plate with yellow screen. The subject was a box of Colman's mustard. If any of your readers have seen this object they will know that it is covered with designs in the most gaudy colours, yellow predominating, but with a good deal of blue.

In the first of the three photographs the yellow had come out black, the blue white, in the second the yellow was of about the right tint but the blue was still white, in the third the yellow was correctly rendered, and so was the blue, which in this last mentioned photograph appeared much darker than the yellow, as it actually did to the eye.

I believe it was found that Mr. Dixon was infringing a patent that had been purchased by Messrs. Edwards and Co., and he ceased to draw attention to his results with orthochromatic plates, but undoubtedly great credit is due to him for bringing his early results before the public. Soon afterwards, Messrs. Edwards and Co., amongst others, took up the manufacture of orthochromatic plates, not "bath" or "dipped" plates, but plates orthochromatised by adding dye to the emulsion at some stage before the coating of the plate, and orthochromatic plates are now articles of commerce in nearly all parts of the world. Moreover the predictions made about them that they would not keep have been found to be false, for they keep nearly, if not quite, as well as ordinary plates.

And now as to the uses of orthochromatic plates. The principal is in copying paintings. In fact there are some paintings that simply cannot be copied at all but for orthochromatic plates. Such a one is that used to illustrate this article. Here, with an ordinary plate the yellows and reds come out just about as black or more so than the blacks, and a dark smudge is the result of exposing a plate, developing, and printing.

The improvement resulting from the use of orthochromatic plates in portraiture is always considerable, but with the slightly olive tint of skin that is common in the people of this country,

especially amongst men, even when town-bred, the improvement is perfectly marvellous. I predict that the first professional portrait photographer who takes to the use of orthochromatic plates in his studio will reach a very great height of popularity.

In landscape work orthochromatic plates are invaluable for some subjects. Amongst these are specially to be included cloud scenes. All know how difficult it is to render clouds satisfactorily with ordinary plates, and how there is little chance of getting them at all on the same plate as the landscape, unless the exposure be made so short that this latter is hopelessly undertimed. With orthochromatic plates it is different. The whole scene may be done justice to. The clouds will come out in their proper tint, and the near foliage will be lighter and fuller of detail than with an ordinary plate.

There is one subject, however, that will appeal to all residents in this country, whether Japanese or foreign, and that is snow-capped Fuji-san. This "peerless mountain" will never be done thorough justice to till it is photographed with orthochromatic plates and a yellow screen, and here is where the trouble comes in. Many makers of orthochromatic plates state that their productions will give orthochromatic results with a yellow screen. All that I can say is that I have used many brands of orthochromatic plates, and have never yet found one that will give even a fairly orthochromatic result if the subject be illuminated by white light. This, however, leads me to state one thing, namely, that, in the case of copying pictures, the yellow screen can be dispensed with if the illuminant be gas or oil lamps. Light from such lamps is so poor in blue and violet rays, that there is no need of the yellow screen the function of which is to cut off the greater number of those over-actinic rays. The exposure for a picture skilfully illuminated with two or more good lamps, according to its size, may be anything from a minute to, say, an hour, according to stop, etc.

Even without a yellow screen, and using day-light, orthochromatic plates show a distinct advantage over ordinary plates in copying pictures, although the result is far from being correct, but in the case of landscape work I have been unable to observe any advantage whatever, unless a yellow screen is used—then indeed the advantage is great with some subjects.

As I have hinted, the necessity for using this yellow screen constitutes a thorough nuisance. It is a screen of glass or some other transparent medium, which should be of a faint lemon tint. Tested by the spectroscope it should be found that it greatly reduces the violet and the blue colour, but slightly affects the blue-green, does not effect the yellow-green or any lower spectrum colour at all. This screen is commonly used in front of the lens, behind it, or in the diaphragm slit, and if used in any of these situations it must be glass "optically ground," otherwise the image formed by the lens will be spoiled. I have used three or four different screens made by opticians, and have not found any one of them satisfactory as regards colour. The colour that has proved far the best of many that I have tried is that of either picric acid or picrate of ammonia. This I mix with gelatine and water, and pour on plates of glass the exact same size as the dry plates to be used. The gelatine presently sets, and after a time dries. These plates are used film to film with the dry plates, and, although it is thus possible to get only one dry-plate in each double dark slide, the method works far better in my hands than that of having a screen at or near the lens. For one thing any kind of fairly flat glass will do. Patent plate is even unnecessarily good, and then there is no trouble in fitting the screen to a particular lens, but any lens may be used. I have written a full description of the method of making these yellow screens in my "Manual of Photography," which has been translated into Japanese by Mr. I. Ishikawa, and is published at the Genrokukwan.

I have just received from Mr. T. R. Dallmeyer two discs of optically ground glass four and a quarter inches in diameter. Mr. M. Kondo has just coated one of these very beautifully with picrated gelatine, and I intend, when it is dry, to cement it to the other with Canada balsam. Perhaps I may have a note on its performance ready for the same number of the *Shashin Sowa* that this appears in. My idea is to fix it at the back of a shutter, on the front of which I have an arrangement whereby any of many lenses may be fixed in position.

There is one thing to be noted about orthochromatic plates, a thing not commonly taken into sufficient account, and that is that all such plates are far from being sensitive to the same parts of the spectrum. One hears it commonly said that different kinds of subjects need plates sensitive to different parts of the spectrum, and that different depths of yellow screen should be used for different snbjects. These statements are not strictly correct. If the light remains of the same colour, there is only one kind of plate that is hypothetically correct, and that is a plate sensitised to all colours; moreover there is for this plate only one hypothetically correct colour screen, the subject constituting in truth no factor in the business. There is a certain degree of truth in the statement, however. What is really meant is that there are many subjects with which practically as good results are got with partially orthochromatised plates as with those fully orthochromatised. And it is much easier to work partially orthochromatised plates than those orthochromatised to all visible light. To take a definite example: For ordinary landscape work, including foliage, clouds, and perhaps snow-capped mountains, there is no practical advantage in orthochromatising farther down the spectrum than well into the yellow. The plate should be thoroughly as possible orthochromatised for the yellow-green, but no appreciable advantage will be found to arise from orthochromatising to the orange and the red, whilst the plate will be made ten times more difficult to work, as it must be handled in what is very nearly total darkness if sensitised for red and orange as well as green and yellow.

As a rule English and American makers do not inform their purchasers for what part of the spectrum their plates are orthochromatised, which is a pity, as the information is very useful. In my experience, however, by far the greatest number of them are orthochromatised only as far as the yellow, or a very little into the orange.

On the continent of Europe there are firms that sell plates orthochromatised to different parts of the spectrum, and which state in their advertisements to what colours their plates are sensitised, and what colour of light should be used in manipulating them. Such a custom is greatly to be encouraged. An English firm has recently issued a plate which, it is claimed, is sensitive to the whole spectrum. I have not had an opportunity of trying these plates as yet, but hope soon to have one, when I shall report on the results.

In a further communication Professor Burton adds:

Since writing a communication to your paper on the subject of orthochromatic photography, Mr. Kondo has coated one of the discs of glass mentioned as received from Mr. Dallmeyer with picrated gelatine, and we have cemented the two together with Canada balsam. The result is the most satisfactory yellow screen for a position near the lens that I have ever used. The photograph in the supplement was taken by the aid of the screen, using an Edwards' orthochromatic plate. The subject is as difficult as is likely ever to be met with. The ground of the picture, which is in lacquer, is of a deep olive-green yellow, and the other colours are vermilion, blue, and gold. I do not know how you may succeed in reproducing the negative photomechanically, but a print on gelatino-chloride paper gives the values almost absolutely right, the reds only coming out a trifle too dark. This is because Edwards's plates, well sensitised for yellows, are but slightly sensitised for red.—*Photography.*

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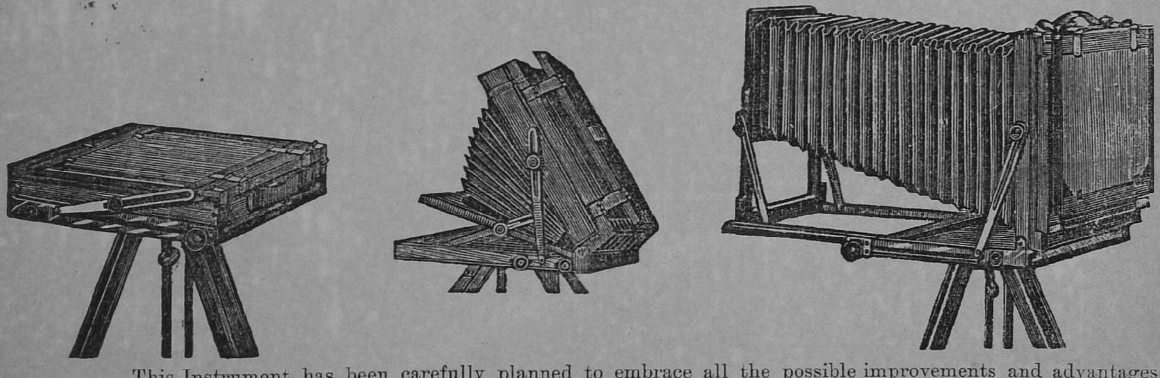

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